First of the airscrew turbines to fly, the Bristol Theseus, two examples of which are seen in their Lincoln flying test bed, also boasts receipt of the first type test certificate for this class of power plant.

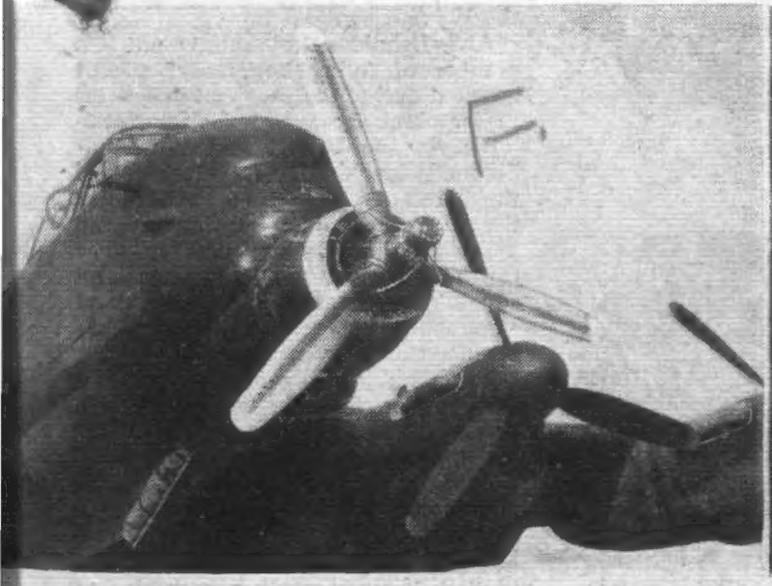
tried out during 1946 with the A.W.52G glider. In addition to its swept-back wing, the full-scale jet-propelled machine embodies a number of very advanced features, for example, boundary layer control by suction, a pressurized crew compartment, and a steerable nosewheel. Though not altering appreciably the stalling speed of the aircraft, the boundary layer control is intended to delay the loss of control due to wing tip stalling. Data for the A.W.52 are: Take-off weight, 33,000 lb; gross wing area, 1,314 sq ft; span, 90ft. Cruising at 330 m.p.h. at 36,000ft the machine is estimated to have a range of 1,500 miles.

From the foregoing, it will be appreciated that, though less complete than could be wished, the range of British military and civil aircraft types has undergone an important expansion in the period under review.

POWER UNITS, LARGE AND SMALL

AFTER the spate of new gas turbine and piston engines which followed the war, it may be regarded in some ways as encouraging that very few new power units have been announced during the past year. It can be taken to indicate that engine manufacturers are satisfied with their latest designs and have been able to concentrate on developing them from prototype to production stage, a task which now takes years rather than months. Thus the talk of engines has been concerned primarily with improvements in detail design, flight testing of the more advanced types and with reliability and fuel consumption. A comparatively new class of aircraft, the mixed-engine flying test beds, have greatly increased in importance.

First of the four-engined test beds was the Rolls-Royce Nene-Lancastrian which has provided much of the data required for the preparation of the Nene-Viking and Tudor VIII. A very similar aircraft is the D.H. Ghost Lancastrian, first of two of more, which is supplying vital



(Above) Two "Mamboloncs" are to be used for development and research, and the first has been flying for several weeks. A similar five-engined layout is used for flight testing of the Rolls-Royce Dart below. The Ghost Lancastrian, lower right, has for some time been providing advance engine operating data for the D.H.106 which is to have four Ghost gas turbines.